

AMENDMENT TO THE CLAIMS

1. (currently amended) A vacuum cleaner comprising:

a suction assembly;

a dust collecting chamber collecting air and dust through an air path, wherein the air path connects the suction assembly to a connecting pipe by a negative pressure;

a driving portion generating the negative pressure and activated by manipulating a driving switch disposed on a handle portion;

a floor cloth rotatably driven in the suction assembly to clean a cleaning surface, the floor cloth arranged in a plane;

a rotary member rotatably disposed on a lower end of the suction assembly, for supporting the floor cloth, wherein the floor cloth rotates in a plane substantially parallel to the cleaning surface and the plane of the floor cloth;

rotary driving means controlled by the manipulation of the driving switch, for supplying a driving force to rotate the rotary member;

power supplying means for supplying an electric signal generated by the manipulation of the driving switch to the rotary driving means; and

~~removable means for removably supporting the floor cloth onto the rotary member~~ wherein the rotary driving means includes a bi-directional rotary motor having a pair of rotary shaft portions;

one of the pair of rotary shaft portions being formed on each side of the rotary motor and simultaneously rotating with each other by the power supplied from the power supply means; and

the rotary shaft portions connecting to a power transmission unit for transmitting a driving force of the rotary shaft portions to the rotary member.

2. (previously presented) The apparatus of claim 1, wherein the power supplying means is disposed on the connecting pipe that is protected from the air path by a protective cover and includes a power terminal electrically connected to the driving switch of the handle portion, and a power conductor for electrically connecting the power terminal to the rotary driving means.

3. (canceled)

4. (currently amended) The apparatus of claim 3, wherein the power transmission unit includes a pair of worm gear members connected to the rotary shaft portions for rotation in the same direction as the rotary shaft portions rotate; and transmission gears meshed with the pair of worm gear members for converting a rotational force in the direction the worm gear members rotate into a rotational force in a direction perpendicular to the rotational direction of the worm gear members and transmitting the converted rotational force to the rotary member.

5. (original) The apparatus of claim 4, wherein the worm gear members are connected to the rotary shaft portions by joint connecting members, respectively.

6. (previously presented) The apparatus of claim 4, wherein the worm gear members have threads formed on outer circumferences thereof in an opposite direction from each other, for rotation in the opposite direction when the transmission gears are rotated.

7. (currently amended) The apparatus of claim 31, wherein the power transmission unit includes transmission gears connected to the rotary member; and a worm gear member having a worm gear portion formed on an outer circumference of the worm gear member for being meshed with the transmission gears, and a key portion formed on one end of the worm gear member for being connected to one of the pair of rotary shaft portions of the rotary driving means in a keyway.

8. (previously presented) The apparatus of claim 7, wherein either the key portion of one of the pair of rotary shaft portions has a key groove having a non-circular section formed on one end, while either the key portion of one of the pair of rotary shaft portions without the key groove has a key portion that is formed on one end having corresponding shape to the key groove.

9. (previously presented) The apparatus of claim 7, wherein the worm gear member has threads formed on the outer circumference in an opposite direction so that the transmission gears can be rotated in the opposite direction.

10. (currently amended) The apparatus of claim 31, wherein the power transmission unit includes transmission gears connected to the rotary member; and a worm gear member having a worm gear portion formed on an outer circumference of the worm gear member for being meshed with the transmission gears, and a connecting portion formed on one end of the worm gear member for being screwed to one of the pair of rotary shaft portions of the rotary driving means.

11. (previously presented) The apparatus of claim 10, wherein one of the connecting portion and the rotary shaft portions has a

male thread formed on the outer circumference, while one of the connecting portion and the rotary shaft portion without the male thread has a female thread formed on the end corresponding to the male thread.

12. (previously presented) The apparatus of claim 11, wherein the male thread and the female thread formed on the connecting portion and the rotary shaft portions are left-hand threads for screw-fastening when the rotary shaft portions are rotated on the rotary motor in a clockwise direction.

13. (previously presented) The apparatus of claim 11, wherein the male thread and the female thread formed on the connecting portion and the rotary shaft portions are right-hand threads for screw-fastening when the rotary shaft portions are rotated on the rotary motor in a counterclockwise direction.

14. (previously presented) The apparatus of claim 11, wherein the male thread and the female thread on the outer circumference of the worm gear member is formed in an opposite direction so that the transmission gears are rotated in the opposite direction.

15. (currently amended) The apparatus of claim 31, further comprising a casing member formed in the suction assembly for enclosing the rotary driving means, thereby screening the rotary driving means from the air path of the suction assembly.

16. (previously presented) The apparatus of claim 15, wherein the casing member has a lower casing having openings formed on a bottom through which the power transmission unit is directly connected to the rotary member and a plurality of fixing means for rotatably supporting the power transmission unit; and an upper casing connected to an upper portion of the lower casing

for screening the rotary driving means mounted on the lower casing from the outside.

17. (canceled)

18. (currently amended) The apparatus of claim 17, wherein the removable means includes at least one hook and loop fastener disposed on a lower surface of the rotary member in a predetermined pattern.

19. (previously presented) The apparatus of claim 18, wherein the hook and loop fastener is seated on a plurality of recesses formed on the lower surface of the rotary member around a center of rotation at a uniform distance from each other.

20. (currently amended) The apparatus of claim 18, wherein the hook and loop fastener is disposed on the lower surface of the rotary member around the center of rotation at an angle~~angle~~angular spacing of 120°.

21. (withdrawn) A floor cloth removably employed in a mounting portion at a lower end of a suction assembly of a vacuum cleaner, the floor cloth for mopping impurities on a cleaning surface, the floor cloth comprising:

- a body contacting the cleaning floor;
- a removable layer attached to an upper surface of the body, supportable by a binding force with removable means formed on the mounting portion; and
- supporting means for improving cleaning efficiency by preventing deformation of the body and enabling easier contact against the cleaning surface, when the body contacts the cleaning surface.

22. (withdrawn) The floor cloth of claim 21, wherein the body and the removable layer are connected with each other by an adhesive.
23. (withdrawn) The floor cloth of claim 21, wherein the supporting means includes a supporting member disposed between the body and the removable layer, for recovering the body into an original shape, elastically.
24. (withdrawn) The floor cloth of claim 23, wherein the supporting member is formed of a porous material capable of absorbing a liquid during a wet cleaning with respect to the cleaning surface.
25. (withdrawn) The floor cloth of claim 21, wherein the supporting means includes a protruding from a lower surface of the body contacting the cleaning surface in a predetermined pattern.
26. (withdrawn) The floor cloth of claim 25, wherein the protruding pattern includes a plurality of protruding lines protruding from the lower surface of the body contacting the cleaning surface in a linear pattern.
27. (withdrawn) The floor cloth of claim 25, wherein the protruding pattern is formed of a fabric that is identical with the fabric of the body.
28. (previously presented) The apparatus of claim 1 wherein the plane of the floor cloth is arranged to be substantially entirely in contact with the cleaning surface.

29. (new)       The apparatus of claim 1, further comprising removable means for removably supporting the floor cloth onto the rotary members.